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10/715,222

11/17/2003

Frederick L. Martin

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06/29/2005

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EXAMINER

FILE, ERIN M

ART UNIT

PAPER NUMBER

2634

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/715,222

Applicant(s)

FREDERICK L. MARTIN

Examiner

Erin M. File

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 8-10, 15-17 and 19-22 is/are rejected.
- 7) ☒ Claim(s) 4, 7, 11-14, 18, 23 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>12/12/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

On page 1, line 30, the recitation, "LC-tuned receivers" should be changed to "inductive-capacitive (LC) receivers".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 9, 10, 15, 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Fleming.

Claims 1, 15, 19, Fleming discloses a direct sequence spread spectrum (DSSS) communication device, comprising:

- a frequency generator that generates a local oscillator signal without use of a piezoelectric crystal (fig.1, 103)

- a frequency converter (105) that receives the local oscillator signal and mixes the local oscillator signal with a received signal to produce a down-converted signal,
- received signal is a DSSS signal (abstract) and therefore must be encoded using a set of DSSS codes
- a differential detector (fig. 1, 150) that receives the down-converted signal
- matched filter correlators (fig. 1, 111, 112) programmed with a reference sequence corresponding to the PN code that the demodulator channel is intended to recognize.

Claim 2, 20, inherits the limitations of Claim 1. Further, Fleming discloses the differential detector (fig. 1, 150) comprises one chip symbol delays (col. 9, lines 51-53), one being an integer multiple of chip periods.

Claims 3, 21, although Fleming does not explicitly state that the differentially detected-signal comprises output chips which are a function of a plurality of successive chips of the received signal, the output chips of a differential detector are by definition a function of a plurality of successive chips of the input signal.

Claim 9, inherits the limitations of Claim 1, further Fleming discloses the down-converted signal comprises a baseband signal (col. 10, lines 1-7).

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Claim 10, inherits the limitations of Claim 1, further Fleming discloses the down-converted signal comprises an intermediate frequency (IF) signal (col. 9, lines 65-67).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5, 6, 16, 17, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fleming, III et al. and in further view of Naden.

Claims 5, 16, 22, inherit the limitations of Claims 1, 15, and 19 respectively. Fleming fails to disclose the frequency generator comprises one of an LC type oscillator, an RC type oscillator, a relaxation oscillator, a ring oscillator and a voltage controlled oscillator, however, Naden discloses the use of a voltage controlled oscillator (fig. 32, 3250) in a direct sequence spread spectrum (DSSS) communication device (col. 1, lines 42-51). Because of the similarity of the function of the local oscillator to downconvert a direct spread spectrum communication device, and further because the Fleming device does not teach the use of any specific type of oscillator, it would be obvious to one skilled in

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the art at the time of invention to incorporate Naden's voltage controlled oscillator into Fleming's device.

Claims 6, 17, inherit the limitations of Claims 1 and 15 respectively, Fleming fails to disclose a control signal for initial adjustment of the frequency of the local oscillator signal, however, Naden discloses a control signal for initial adjustment of the frequency of the local oscillator signal in a direct sequence spread spectrum (DSSS) communication device (col. 44, lines 7-10). For the reasons specified above, it would be obvious to one skilled in the art at the time of invention to incorporate Naden's control of the local oscillator into Fleming's device.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not

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described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 8, includes the limitation, "wherein the frequency converter comprises a multiple conversion frequency converter". However, the drawings do not support this embodiment of multiple conversion frequency conversion. The specification mentions that this embodiment could be used instead of the single conversion receiver shown (p. 10, lines 1-3), but does not explain or show how this is done.

Claim Objections

8. Claim 5-7 are objected to because of the following informalities:

Claim 5, in the recitation beginning in line 2, "...comprises one of an LC type oscillator, an RC type oscillator..." is improper. The terms LC and RC should be properly defined, such as, inductive-capacitive (LC) and resistive-capacitive (RC).

Appropriate correction is required.

9. Claims 4, 11-14, 18, 23, and 24 are objected to as dependent upon a rejected Claim, but would be allowable if rewritten in independent form.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erin M. File whose telephone number is (571)272-6040. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571)272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Erin M. File

6/22/2005



STEPHEN CHIN
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